USER MANUAL

Version BASIC SD: 3.26

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(*) Actions: I = Insert, R = Replace, Ve = Verify, N = New

(**) Sections: A = All

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LIVE TV STUDIO BASIC SD suite
USER MANUAL

Contents:

1. INTRODUCTION 3
  1.1. PURPOSE 4
  1.2. USE 4
  1.3. PREREQUISITES 4
2. VERSION OF LIVE TV STUDIO 4
3. USER MANUAL FOR EVI-BRC CONTROL 5
  3.1. ELEMENTS OF EVI-BRC CONTROL 7
    3.1.1. MAIN APPLICATION WINDOW 7
    3.1.2. ADVANCED OPTION PANEL (hidden by the QUAD display) 7
    3.1.3. ONE OF FOUR WINDOWS (camera control panels) - cam 1 8
    3.1.4. QUAD VIDEO DISPLAY (standard mode – key F7) 8
    3.2.1. SELECTING A CAMERA MODEL 9
    3.2.2. CONNECTING A CAMERA TO SPLITTER QUAD 10
    3.2.3. SELECTING COM PORTS 11
    3.2.4. CONTROLLING CAMERAS IN A DC SYSTEM (DAISY CHAIN) 12
    3.2.5. WIRELESS LIVE EVI-BRC REMOTE CONTROLLER 15
    3.2.6. VIEW MODE SELECTION: Internal QUAD or Web VLC 17
    3.2.7. CONTROL MODE SELECTION: 1 OR 4 JOSTICKS 18
  3.3. STARTING THE APPLICATION 19
    3.3.1. QUAD VIDEO DISPLAY 19
    3.3.2. SELECTING QUAD VIDEO DISPLAY PARAMETERS 21
    3.3.3. SELECTING A COM PORT NUMBER FOR A CAMERA 27
  3.4. REGISTERING THE APPLICATION 29
  3.5. WORKING WITH CAMERAS 31
  3.6. SWITCHING ON A MOUSE/JOYSTICK CONTROL 32
  3.7. MOUSE CONTROL 32
    3.7.1. PTZ POSITION 32
    3.7.2. CAMERA PRESETS 33
    3.7.3. CAMERA MENU SETTINGS 34
    3.7.4. CAMERA SETTINGS AND FUNCTIONS 34
  3.8. 3D JOYSTICK CONTROL 35
    3.8.1. SELECTING A CAMERA 35
    3.8.2. CHANGING CAMERA PTZ POSITION 35
    3.8.3. CAMERA PRESETS 36
    3.8.4. CAMERA SETTINGS AND FUNCTIONS 36
  3.9. CAMERA CONTROL INTERFACE – symbols 37
4. APPENDIX 41

1. INTRODUCTION

1.1. PURPOSE

This manual describes how to use LIVE TV STUDIO applications in general. You should read it before you get to know particular modules using relevant detailed manuals. Many actions like opening, searching, saving and reading from a disk work the same in all modules of the LIVE TV STUDIO package.

When you understand how these standard actions work, you will not have to learn them again while using different tools.

1.2. USE

This manual applies to the LIVE TV STUDIO applications in version 3.26 and is intended for the following groups of users:

- Video engineers and regular users.
- Testing team (Developer).

1.3. PREREQUISITES

Before you get started with this manual, make sure you are familiar with:

- Personal computers in general.
- Microsoft Windows operating system.

2. VERSION OF LIVE TV STUDIO

LIVE TV STUDIO BASIC SD/HD suite includes:

1. **EVI-BRC CONTROL** – main application for working with cameras
   EVI-BRC CONTROL DC– main application for working with cameras

2. **LIVE EVI-BRC REMOTE CONTROLLER** – camera control application, a remote COM port, to be installed on a remote computer with a camera connected to a RS-232 port
3. **VLC –** software for remote view over LAN/WiFi/internet (normal free version)

4. **Video QUAD Window WM 9 Capture** – alternative video display application

5. **STAY ON TOP** – application adding a new "Stay on top" option to WM9CAP

LIVE TV STUDIO PRO SD/HD suite includes:

1. **EVI-BRC CONTROL** – main application for working with cameras

2. **LIVE EVI-BRC REMOTE CONTROLLER** – camera control application, a remote COM port, to be installed on a remote computer with a camera connected to a RS-232 port

3. **LIVE REMOTE PROJECTION PILOT** – application for playing files on another computer in a LAN/WiFi/Internet network

4. **LIVE REMOTE PROJECTION PILOT LITE** – application for playing files on another computer in a LAN/WiFi/Internet network

5. **LIVE REMOTE MEDIA PROJECTOR** – application installed on a remote computer reading and executing commands from **PILOT LITE** or EVI-BRC CONTROL (automatically opens multimedia files and changes presets of cameras 1-4)

6. **Video QUAD Window WM 9 Capture** – alternative video display application

7. **STAY ON TOP** – application adding a new "Stay on top" option to WM9CAP

8. **LIVE REMOTE CONTROLLER FOR SE500** – application for remote control of the Datavideo SE500 mixer

9. **IrfanView** – application for displaying graphics, animations and audio/video files on a remote computer

10. **IrfanView plugins** – plugins for IrfanView

11. **IrfanView Languages** – language files set for IrfanView

12. **LTVS Sctipting** – software which gives cameras and video switcher ability to work in automatic realization mode.

13. **VLC –** software for remote view over LAN/WiFi/internet (normal free version)

3. USER MANUAL FOR EVI-BRC CONTROL

EVI-BRC CONTROL is a basic application for working with cameras in LIVE TV STUDIO suite.

It lets you keep an eye on an image from cameras 1-4 that are connected to the system and on camera settings as well as have remote control over their most important functions at the same time. The user interface was designed to provide optimum camera control and automation of the most commonly used functions. It offers innovative solutions (and protected by law) with which you can limit a number of people handling live video broadcasts (up to 4 cameras) **only to 1 person**.

In the application, you can use either mouse or 3D joystick. You can control cameras (1-4) with the mouse or ergonomic multi-function 3D joystick. If you use the joystick, you do not have to use the mouse at all as buttons and elements of the joystick let you operate the most typical camera functions you need during a broadcast.

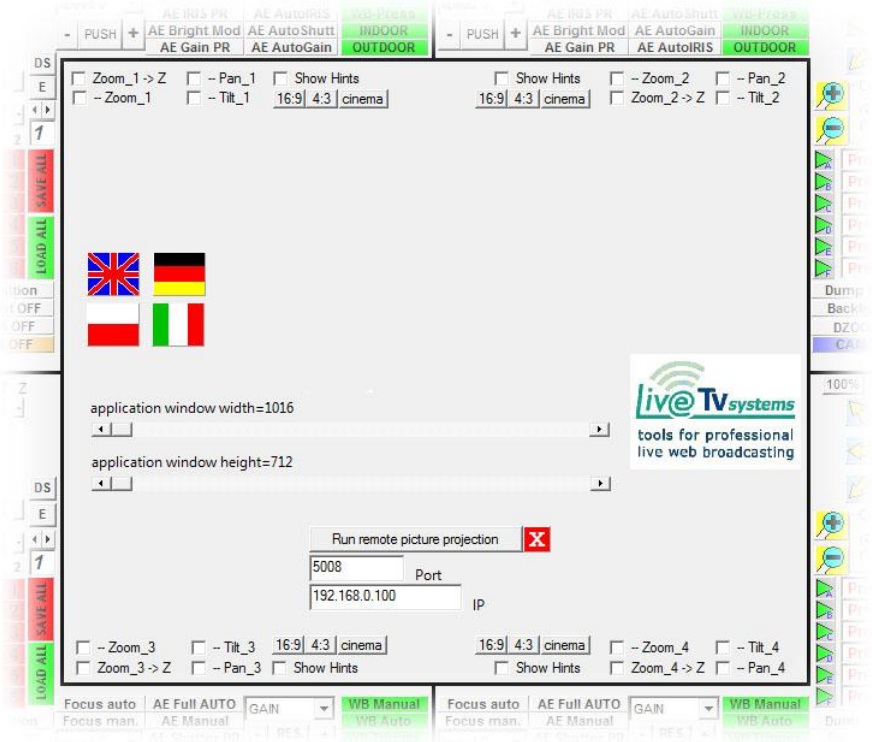
Screenshots of the application's interface presented below correspond to the trial version. It has the same functions as the commercial version but time you can use it is shortened to 5 minutes..

Registration process is described later. If you want to get a registration key, you need to buy a license for the application.

3.1. ELEMENTS OF EVI-BRC CONTROL

3.1.1. MAIN APPLICATION WINDOW

3.1.2. ADVANCED OPTION PANEL (hidden by the QUAD display)



3.1.3. ONE OF FOUR WINDOWS (camera control panels) - cam 1

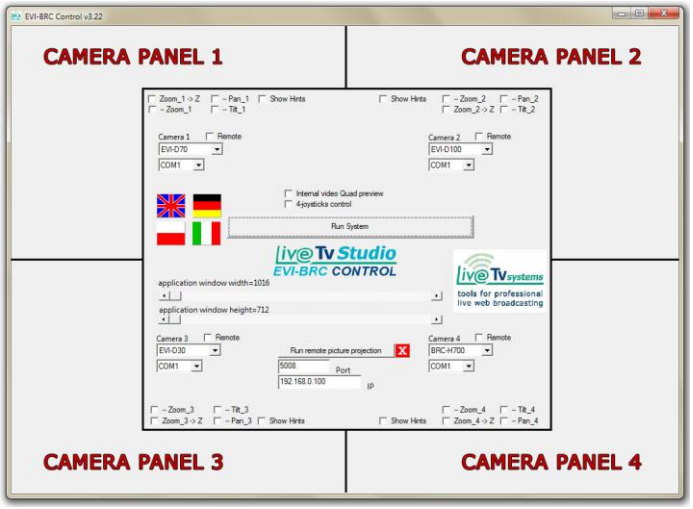
3.1.4. QUAD VIDEO DISPLAY (standard mode – key F7)

3.2. STARTING THE APPLICATION - FIRST LAUNCH

By clicking on the application icon on a desktop or choosing the application name from the START menu, you can launch the application start window.

3.2.1. SELECTING A CAMERA MODEL

With your first launch, you need to select a virtual number for a camera. The best way is to use your own camera-numbering method, e.g. you can number cameras on the set from the left to right.

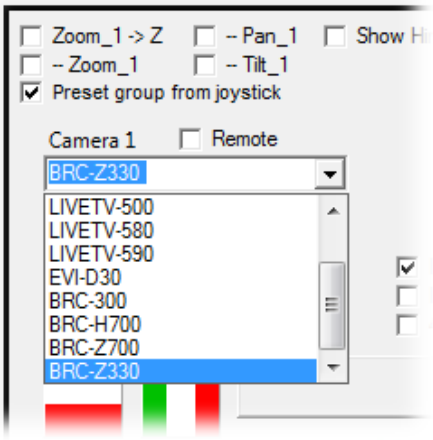


Camera no. 1 will be controlled by panel no. 1 located in the left upper corner of EVI-BRC CONTROL. Select remaining cameras in another panels: camera no. 2 – the right upper corner, camera no. 3 – the left lower corner and camera no. 4 – the right lower corner.

Later, select a type/model of a camera that has been connected and will be controlled for each of panels 1-4 (windows with buttons for setting camera functions).

List of SONY and other cameras that can be controlled by the application in 3.25 version:

SD	HD
EVI-D30/31	EVI-D30/31
EVI-D100/100P	EVI-D100/100P
EVI-D70/70P	EVI-D70/70P
EVI-D80/80P	EVI-H100s/100V
EVI-D90/90P	BRC-300/300P
BRC-300/300P	LIVETV 580SD
LIVETV 580/590SD	LIVETV 590SD
	EVI-HD1/3/7
	BRC-Z330
	BRC-Z700
	BRC-H700



3.2.2. CONNECTING A CAMERA TO SPLITTER QUAD

Some mixers already have a built-in video splitter that sends video signal with an image from 4 inputs to one output (e.g. DATAVIDEO SE500). Users who do not have such equipment can use COLOR QUAD SPLITTER (optional in LIVE TV STUDIO).

Connect composite video signal from cameras to BNC input sockets of QUAD SPLITTER (for RCA connectors use BNC-RCA adaptors). QUAD SPLITTER comes bundled with the BOX version but you can also buy it in our e-store or use another model.

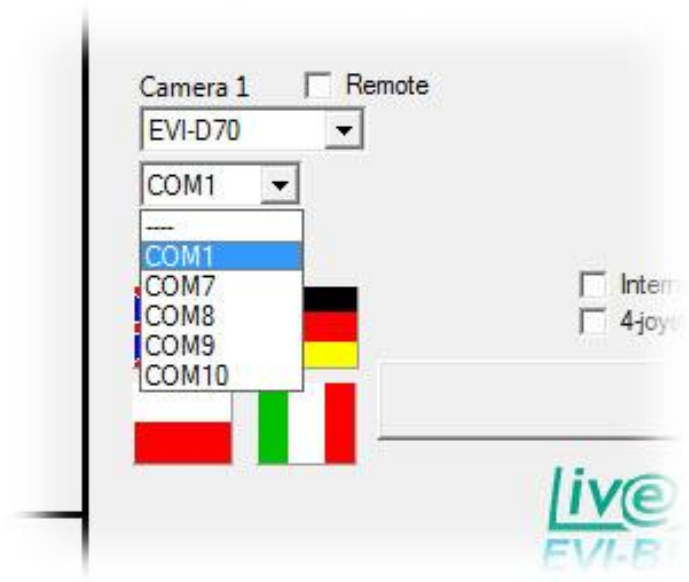
Connect cameras in the same order that you numbered them. Camera no. 1 should be connected to Video Input 1, camera no. 2 to Video Input 2 and so on. In this way, a camera image on the QUAD display will be visible next to corresponding panels. You need to perform these operations only once (unless you number cameras in the system in another way). The application will save these settings and use your configuration next time you launch it.

Connect QUAD SPLITTER BNC video output to a yellow RCA input socket of a USB capture device that comes bundled with the LIVE TV STUDIO suite (or another video-grabber/graphic card) and is used for displaying an image in an internal EVI-BRC CONTROL window. Plug QUAD SPLITTER AC/DC adaptor into 230V power supply. In a QUAD SPLITTER control panel, press the QUAD VIEW button (rectangle divided into 4 smaller identical rectangles). SONY EVI and BRC cameras are on after switching power on by default so they should send video signal to QUAD SPLITTER.

3.2.3. SELECTING COM PORTS

Cameras are controlled with the use of computer COM serial ports. When working with a camera, a computer exchanges data with SONY EVI and BRC series cameras using some kind of RS-232 standard that was developed by SONY and is called VISCA. You should select an appropriate RS-232 COM port number for a camera connected to the system. In the application, you can choose any of COM ports available in your system from a drop-down list for each camera.

One RS-232 port can control only one camera so you can select a certain COM number for just one camera. If you have 4 COM ports in your system and 4 cameras connected to them you do not know yet which COM port is connected to a certain camera. First, select ports in any order and write it down for yourself, e.g. in a text file:



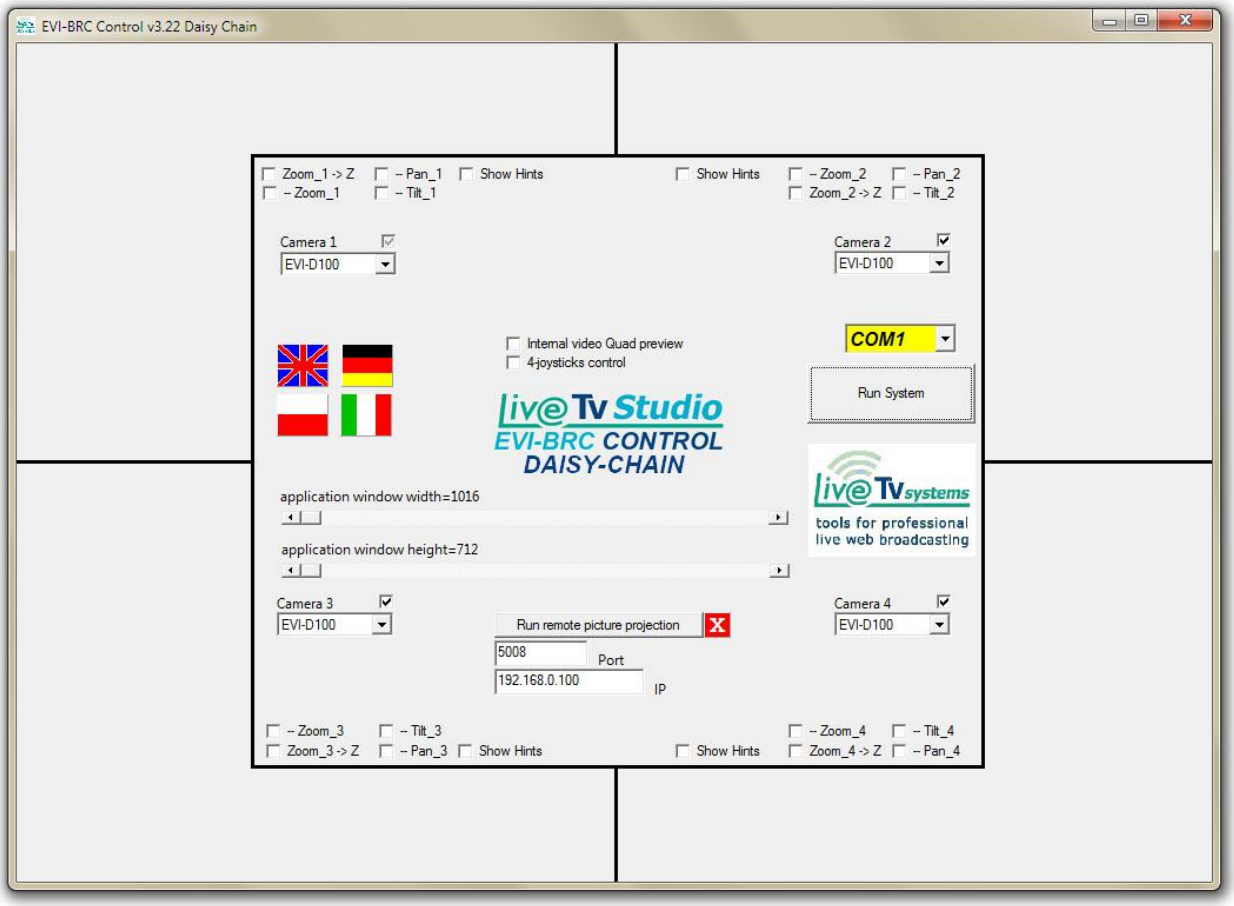
Camera no. 1 – COM no. 1
Camera no. 2 – COM no. 2
Camera no. 3 – COM no. 3
Camera no. 4 – COM no. 4

If COM ports are put into external USB-RS-232 converters, you may not know which number particular ports (converters) have at the moment.

3.2.4. CONTROLLING CAMERAS IN A DC SYSTEM (DAISY CHAIN)

A Daisy Chain system lets you connect the controls of up to four cameras in total to a computer, using only a single COM port. This solution allows to limit a number of COM ports used and cables coming out of the control computer. At the same time, in such a system you cannot take advantage of a remote-control function with use of LIVE EVI-BRC REMOTE CONTROLLER.

A DAISY CHAIN system is used for example in sets with a SONY RM-BR300 hardware controller. For such sets – with up to 4 cameras – you can use EVI BRC CONTROL DC without a need to modify anything (all you have to do is to a connect the first camera in the chain to a COM port, instead of connecting to RM-BR300).

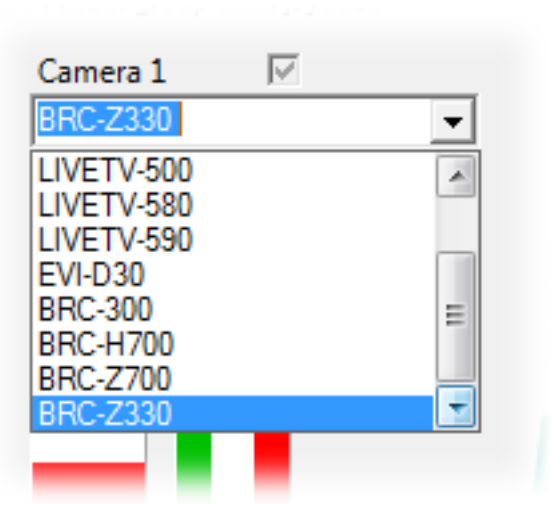


In order to properly set up a Daisy Chain system, connect the controls of the first camera to a computer COM1 port. After that, connect a VISCA OUT output in a camera no. 1 to a VISCA IN input in a camera no. 2 with a VISCA-VISCA cable. Follow this step for another cameras (up to 4).
Once you install LIVE TV STUDIO BASIC SD, you will see 2 EVI-BRC CONTROL icons on your desktop. "DC EVI-BRC CONTROL" is a DC version. The startup screen differs from the one of a STAR version in a Daisy Chain logo. Also, it does not have 4 boxes to choose separate COM ports for each camera – there is only a single field.

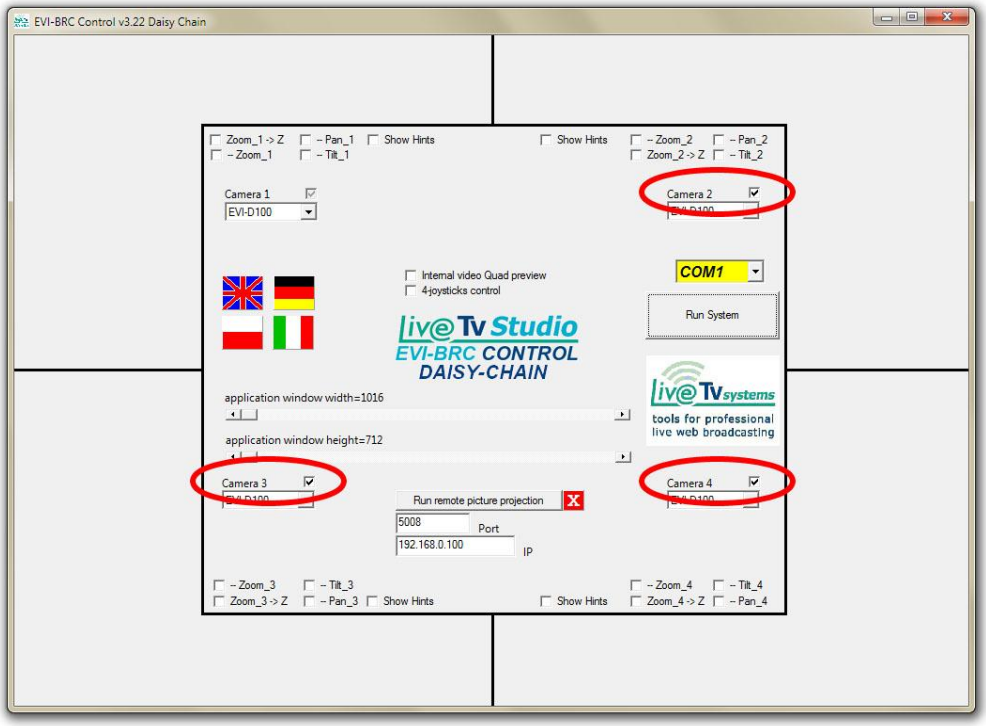
The first stage leading to proper configuration of LIVE TV STUDIO BASIC SD for a Daisy Chain system needs is to set a type of cameras you operate. Camera numbers (camera no. 1, camera no. 2, camera no. 3, camera no. 4) corresponds to order in which cameras are physically connected to a computer (that is, camera no. 1 is a device directly connected to a computer and camera no. 4 is the last device in the chain). Choose a type/model of a camera that has been connected and is to be operated for each of 4 panels (windows with buttons for setting camera functions) one by one.

A list of SONY cameras compatible with this version of the application:

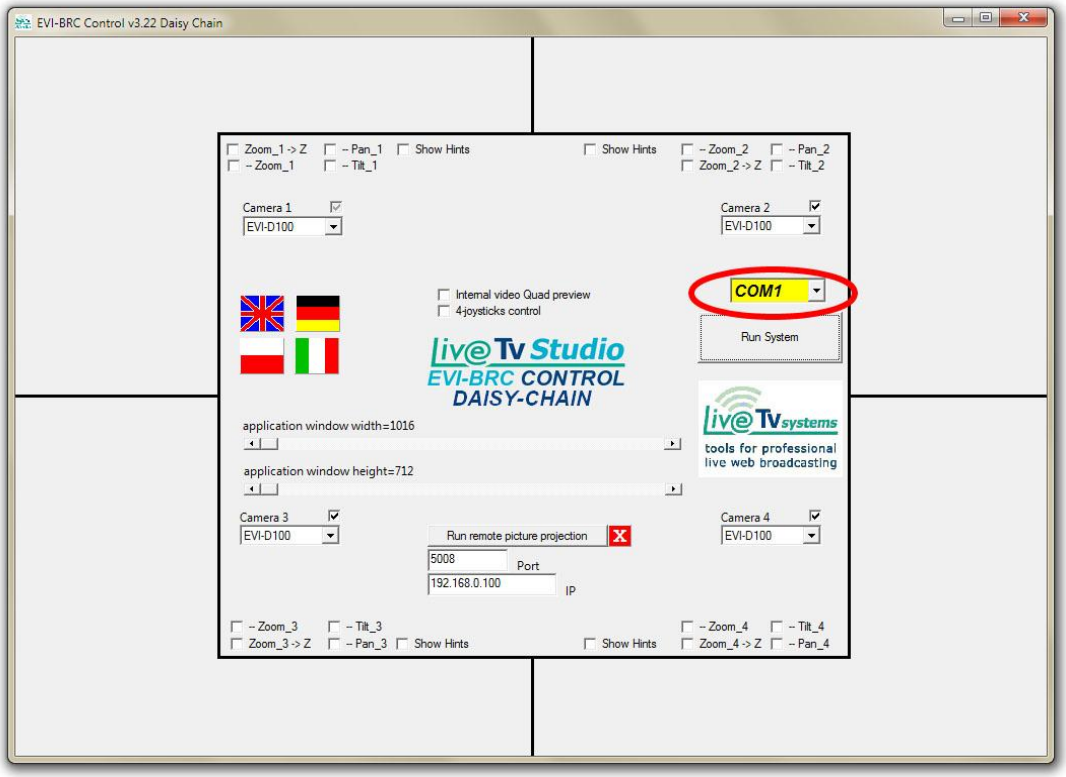
SD	HD
EVI-D30/31	EVI-D30/31
EVI-D100/100P	EVI-D100/100P
EVI-D70/70P	EVI-D70/70P
EVI-D80/80P	EVI-H100s/100V
EVI-D90/90P	BRC-300/300P
BRC-300/300P	LIVETV 580SD
LIVETV 580/590SD	LIVETV 590SD
	EVI-HD1/3/7
	BRC-Z330
	BRC-Z700
	BRC-H700



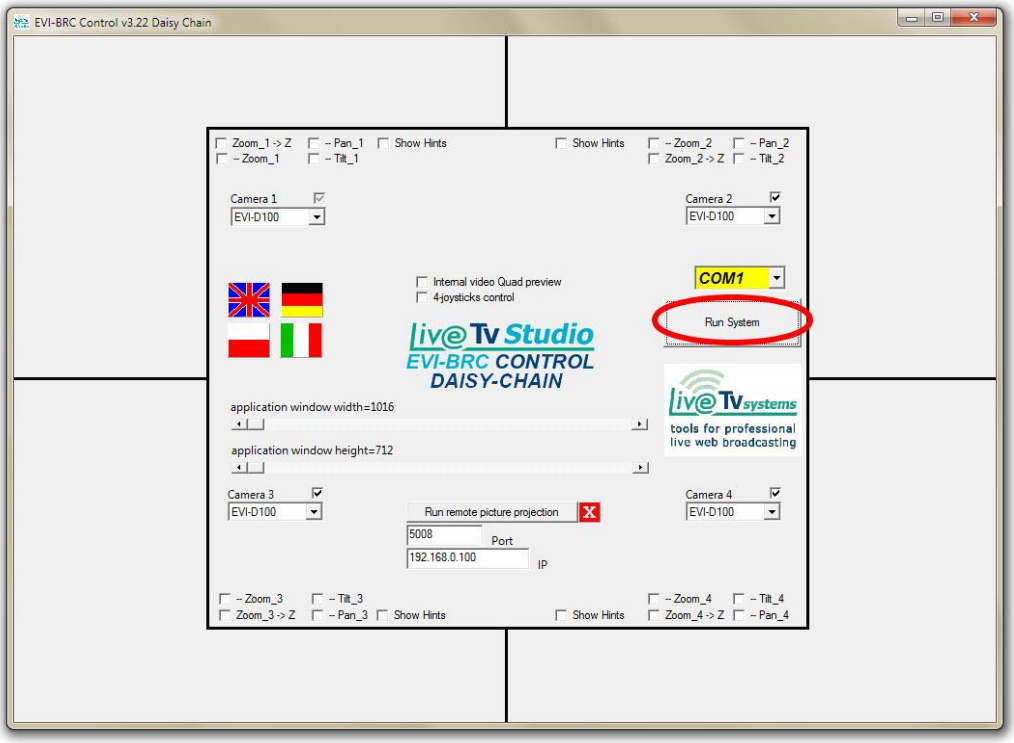
In order to choose a proper number of cameras in a Daisy Chain system, check a field located right beside to a camera description in an area next to a camera type selection window as follows.



Then, choose a proper number of a COM RS232 port which you have connected the first camera to (often this is a COM1 port).



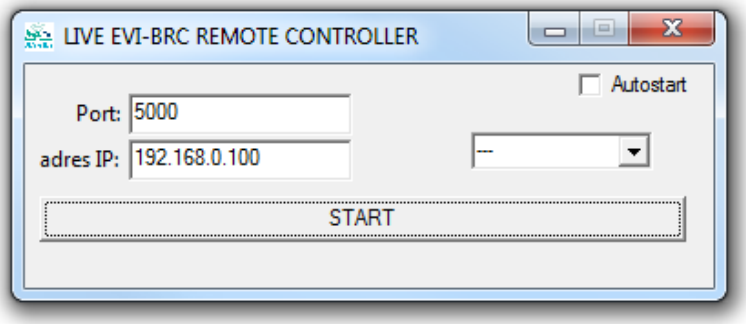
Once the configuration is done, press the System Start button.



You will see a function menu giving you a possibility to operate all the cameras you chose before. Further system operation steps is the same as for a Star system – see chapter no 3.2.3.

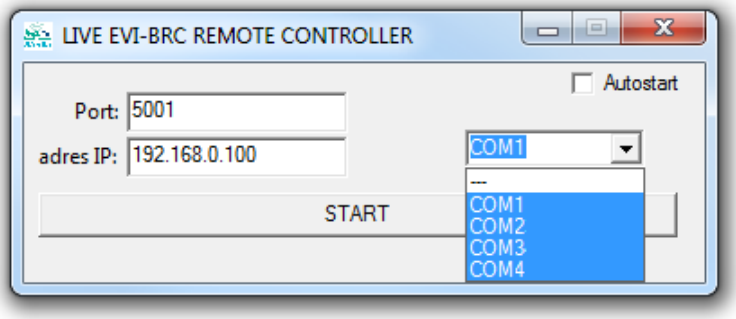
3.2.5. WIRELESS LIVE EVI-BRC REMOTE CONTROLLER

It is also possible to operate cameras via WiFi/LAN/Internet. It means that each camera can be connected to a remote wireless WiFi (or e.g. Bluetooth) COM port or COM port of any other computer/notebook with Windows OS that has access to the Internet and has its own IP address and where **LIVE EVI-BRC REMOTE CONTROLLER** (one of the LIVE TV STUDIO BASIC/PRO modules) will be installed. This is a remote receiver that connects to the main control application, EVI-BRC CONTROL, via the network.

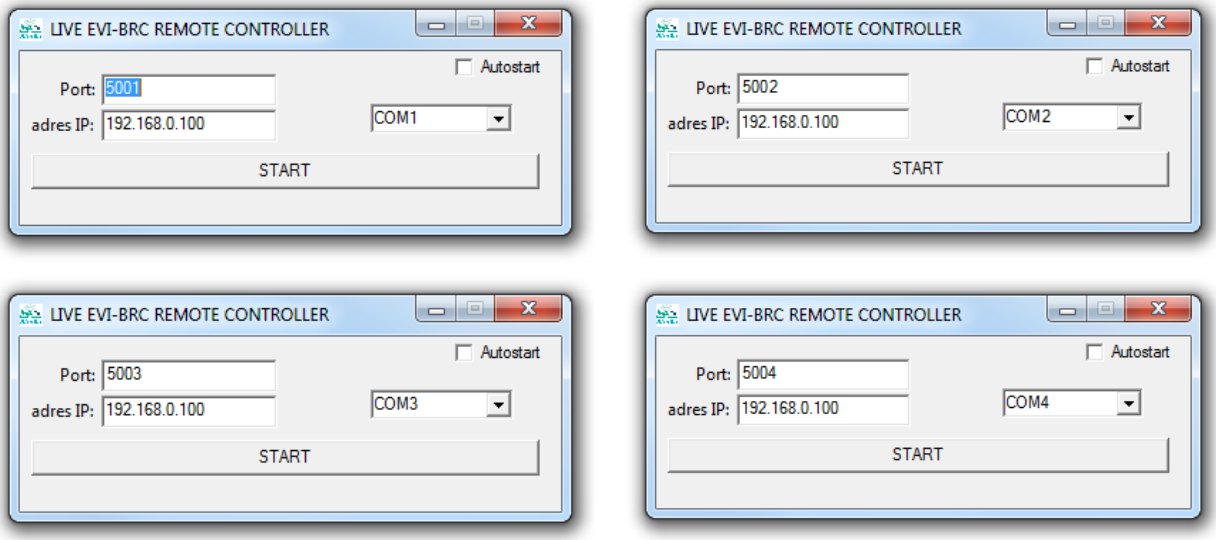


After you install this application, type in an IP address of a computer where the EVI-BRC CONTROL is launched and port number (this port, 5000 by default, must be unlocked in a router/firewall and in the Windows Firewall).

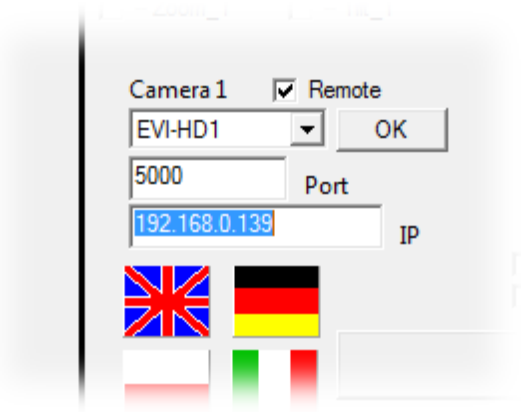
Another step is to select (from a drop-down list) a COM port that corresponds to a connected camera (for 2 or more COM ports in the system). After you start this application next time, both IP address and COM port will be already present as saved settings.



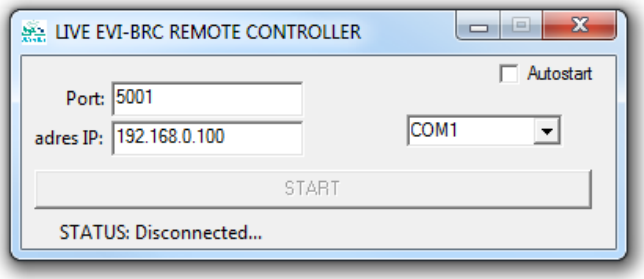
In order to remotely operate 2 or more cameras on one remote computer, launch a few instances of the LIVE EVI-BRC REMOTE CONTROLLER application and type in another port number for each (e.g. 5001 and so on) and select another COM port (see example for 4 cameras below).



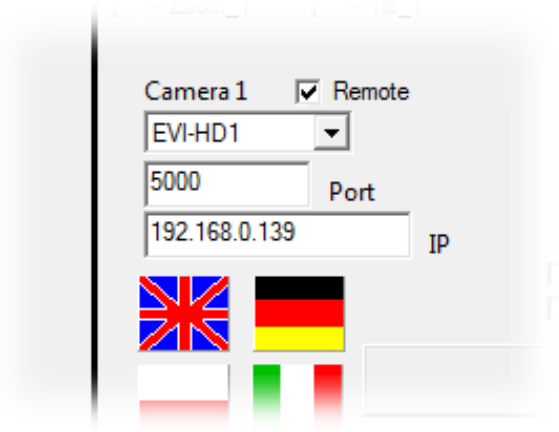
Later, in a control panel of a TCP/IP camera you have selected (the main application) select TCP/IP. A window with a port number and IP address of a remote WiFi port/remote computer where the REMOTE TCP/IP CONTROLLER application is launched on will appear.



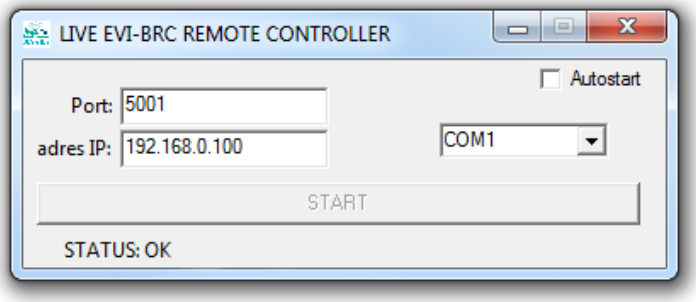
Another step is to press the START button in the REMOTE TCP/IP CONTROLLER application on a remote computer. First, "STATUS: Disconnected" will be displayed.



Now, click on the "OK" button on the main application start screen. When this key disappears, it means the application have successfully connected to the LIVE EVI-BRC REMOTE CONTROLLER application.



You can see "STATUS: OK" in the LIVE EVI-BRC REMOTE CONTROLLER application window.

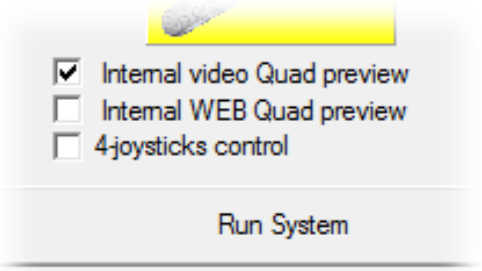


It means that both applications are communicating via the network now. You can also use the Autostart option by checking it.

3.2.6. VIEW MODE SELECTION: Internal QUAD or Web VLC

You can check one from two modes of internal view in application window:

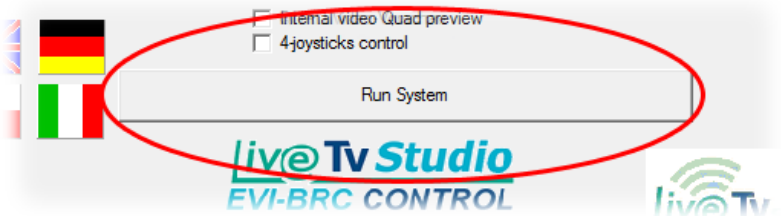
1. Internal video QUAD preview – special window for this application
2. Remote view WEB QUAD VLC – You need install before the software VLC (free)
   Use option 2, when you need camera view from another computer (connected over WiFi/LAN/Internet) with installed video streaming software, for example VLC (you find it on the LIVETVSTUDIO installation file/disc too).



3.2.7. CONTROL MODE SELECTION: 1 OR 4 JOSTICKS

After you select a COM port number for each camera (or after you connect to a LIVE EVI-BRC REMOTE CONTROLLER software – read the 3.2.5.), you can also decide whether you want to control them all with just one joystick (by default) or have one joystick for each camera (for more difficult tasks – ballet, theatre, some concerts and sports events etc.). Of course, when you want to use this option, you need to connect the same number of joysticks as cameras that are in the system.

If you are going to control cameras directly by COM ports, that is they are wired (no LIVE EVI-BRC REMOTE CONTROLLER used), after you select a COM port number for each camera, you should also decide whether cameras are to be controlled all with just one joystick (by default) or whether you want to use only one joystick for exactly one camera.



Now, you can start the application by pressing **SYSTEM START** (a button in the centre of the window).

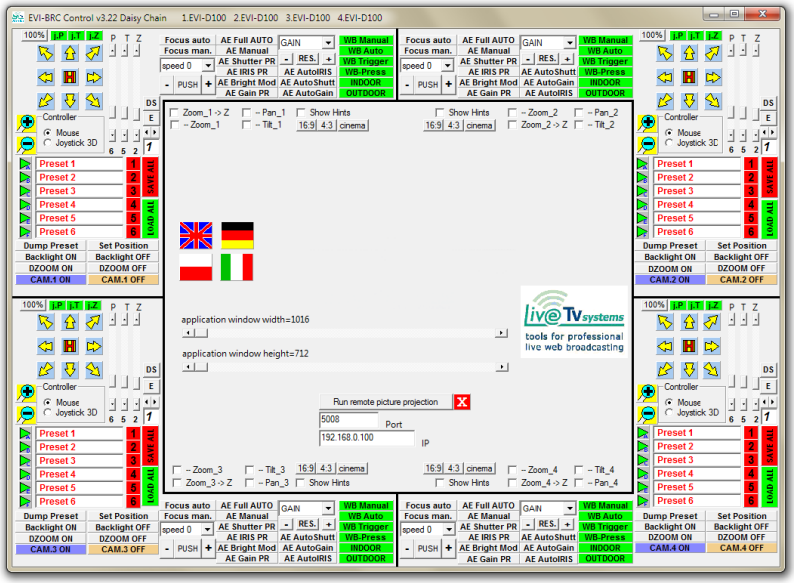
3.3. STARTING THE APPLICATION

If the application has been installed properly and COM port parameters are set well (by default that is so), you should see the application interface window with camera panels and set of control buttons used for setting a position, zoom and camera functions.

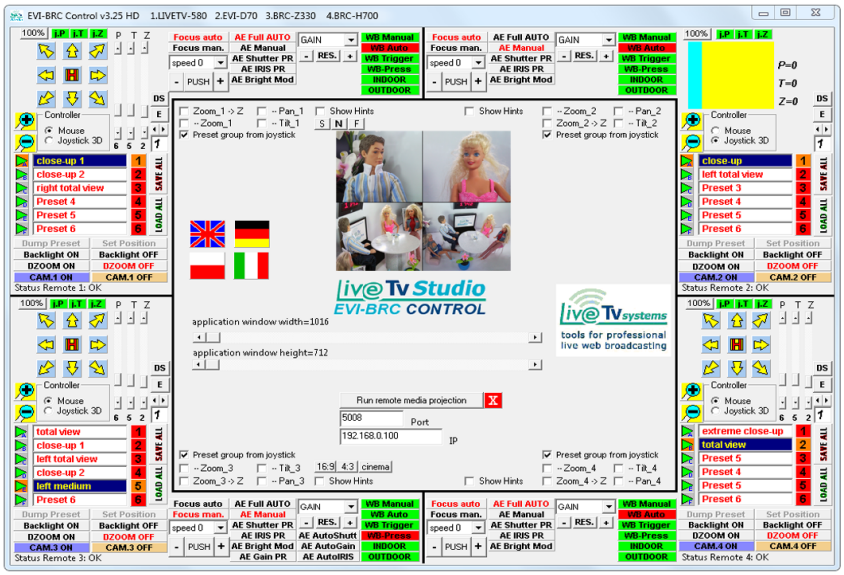
3.3.1. QUAD VIDEO DISPLAY

It is located in the centre of the application window and offers 4 different operation modes. Switching between these modes is done by using F5, F6, F7 and F8 function keys.

F5 = OFF - switching off a video display (e.g. in order to get to a settings panel that is hidden by it or to use another application as a video display)



F6 = MINI - minimazing a display (dimensions that depend on a size of the app. window)



F7 = STANDARD - display in a standard size, dimensions and positions are modified when you change these values for the main application window of EVI-BRC CONTROL

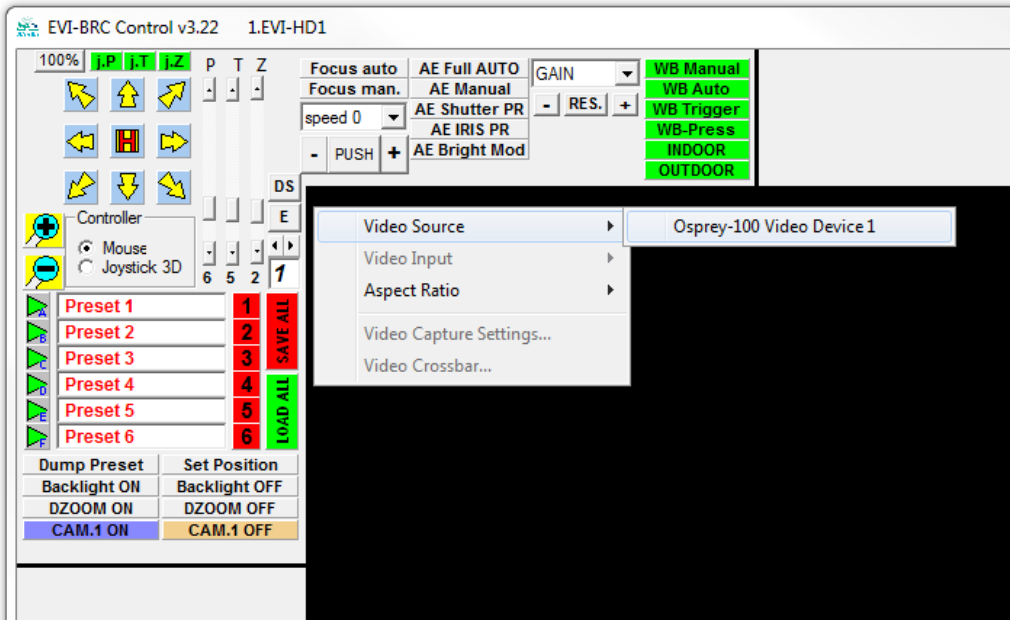
EVI-BRC Control v3.25 HD 1.LIVETV-580 2.EVI-D70 3.BRC-Z330 4.BRC-H700
Status Remote 1: OK
Status Remote 2: OK
Status Remote 3: OK
Status Remote 4: OK

F8 = MAX - display in a maximum size, scaled to a current size of the camera control application window

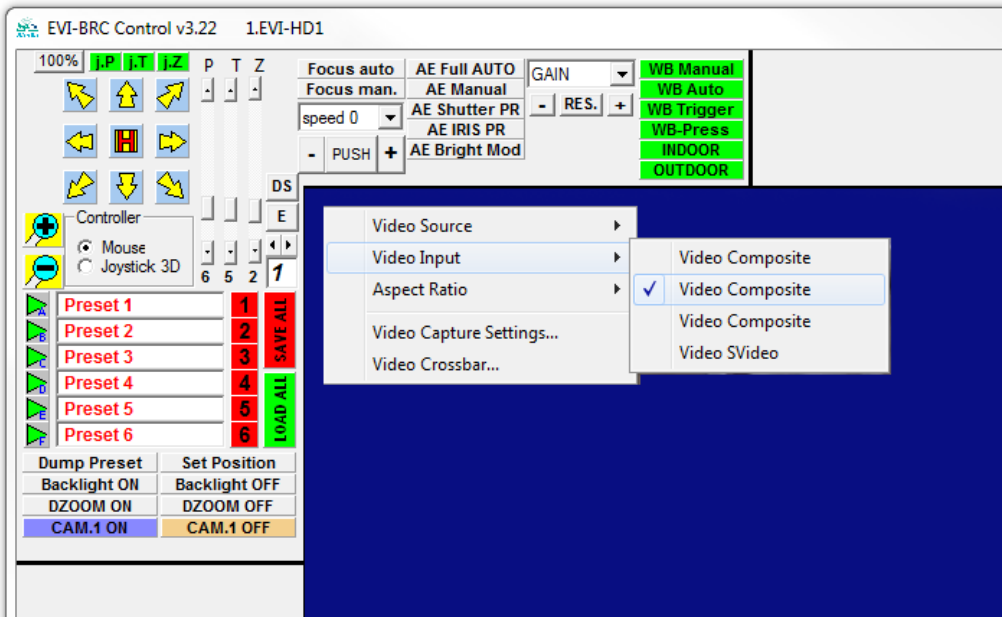
3.3.2. SELECTING QUAD VIDEO DISPLAY PARAMETERS

When you want the QUAD video display to present an image from QUAD SPLITTER: at first, select a language for the video display messages by pressing a corresponding flag. If you cannot see a window with flags, first disable the video display for a moment by pressing **F5**. After you select a language, enable the video display by pressing **F7**.

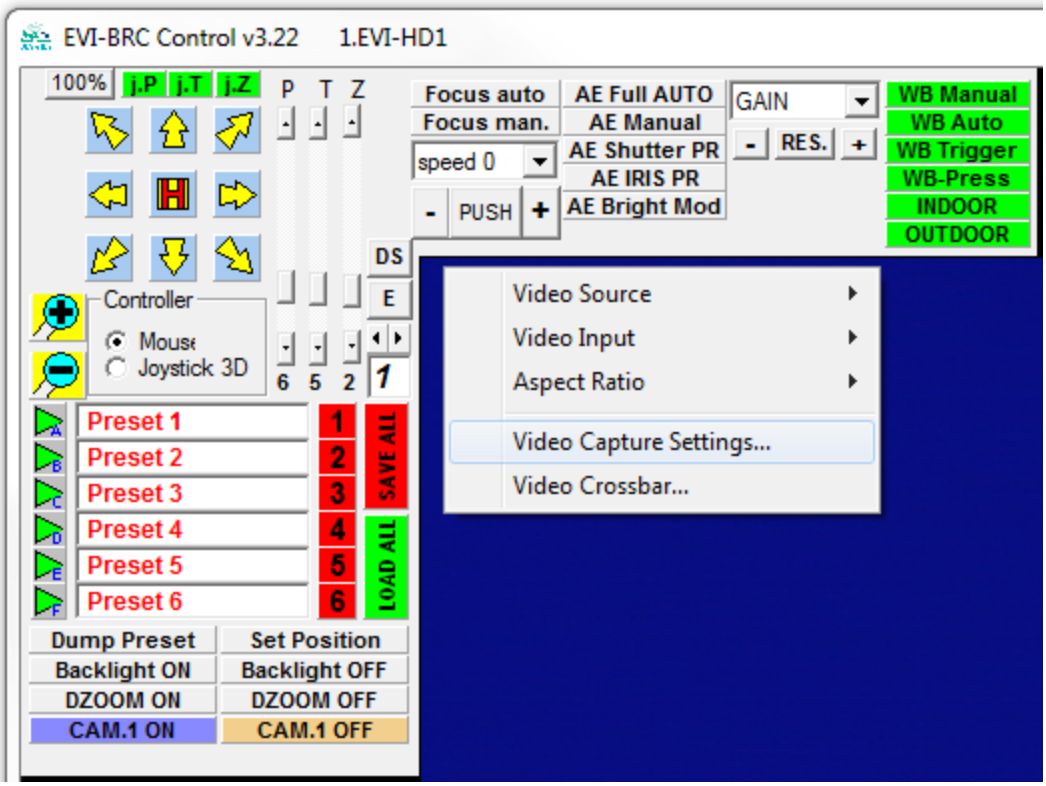
Now, you need to move the mouse over the display (it should be black if you have not set video input yet) and **press the right mouse button**. A menu for selecting a video device, video input (CROSSBAR) and video device/card parameters will appear.



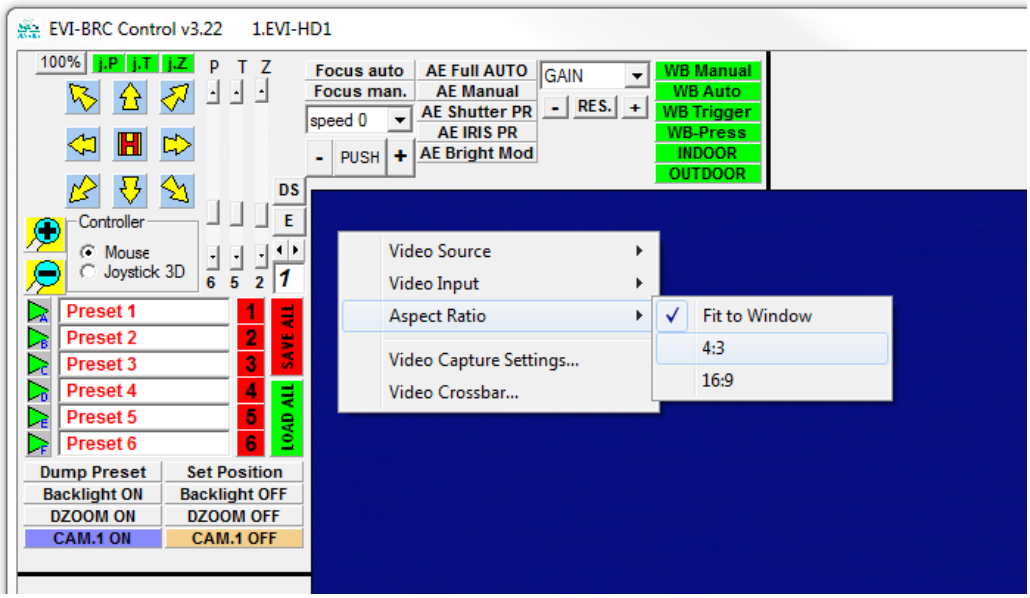
After you select a device video signal from QUAD SPLITTER is connected to, an image from cameras 1-4 will appear in the video display.



Another step is to check settings for a selected video device and correct them, if necessary



After you see image from camera, you can also choose Aspect Ratio (16:9, 4:3 ora Fit to window).

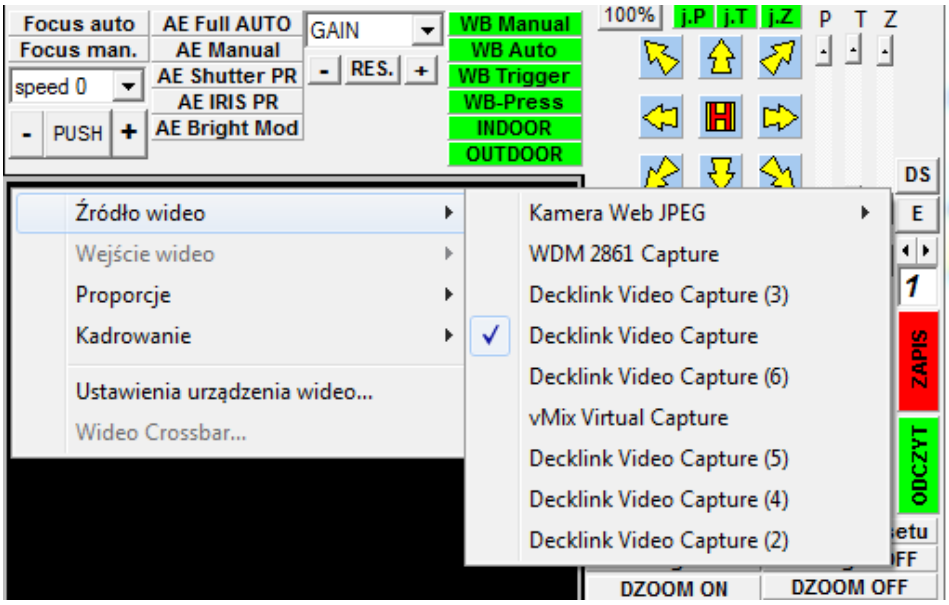


For remote camera control via internet, the remote computer preview is required. Cameras need to be connected to the remote computer.

You can choose between two types of dedicated software, those for Web JPEG streaming and those for audio-video straming. The first group of programs includes applications like WebcamXP (http://webcamxp.com) or Yawcam (http://yawcam.com). Both of them allow you to control the cameras with a minimum delay time. The best result can be obtained when you lower the settings of video size and quality, but also mind your Internet connection speed while setting them. Remember to install those programs both on the controlling and the remote computer.

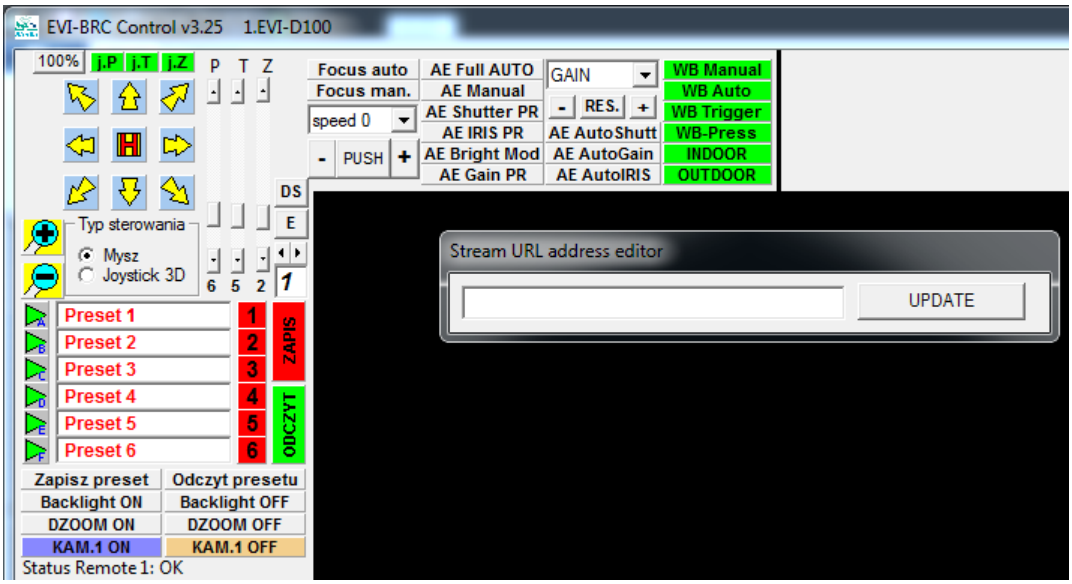
Additionally, WebcamXP offers you the feature of transmitting the audio data.
If you want to use those programs, you have to select "Internal video QUAD preview" when you start the Live TV Studio. After clicking "Run System", you can right-click on the video area and then select the video source, where you can choose from video devices to which video is transmitted from the QUAD device (like ROLAND VR-3 and Datavideo SE-500, or BlackMagic ATEM series devices like Television Studio or 1M/E).

We advise to use the WebcamXP program in the remote computer (you can download this software from http://webcamxp.com) and to choose the video device (card or USB-Video converter) as a source, to which the image from the QUAD splitter is connected.



In the same menu, below the video source option, you should now select "Video Capture Settings" and enter the IP address (external) and COM which are used by Webcam XP running on the remote computer.

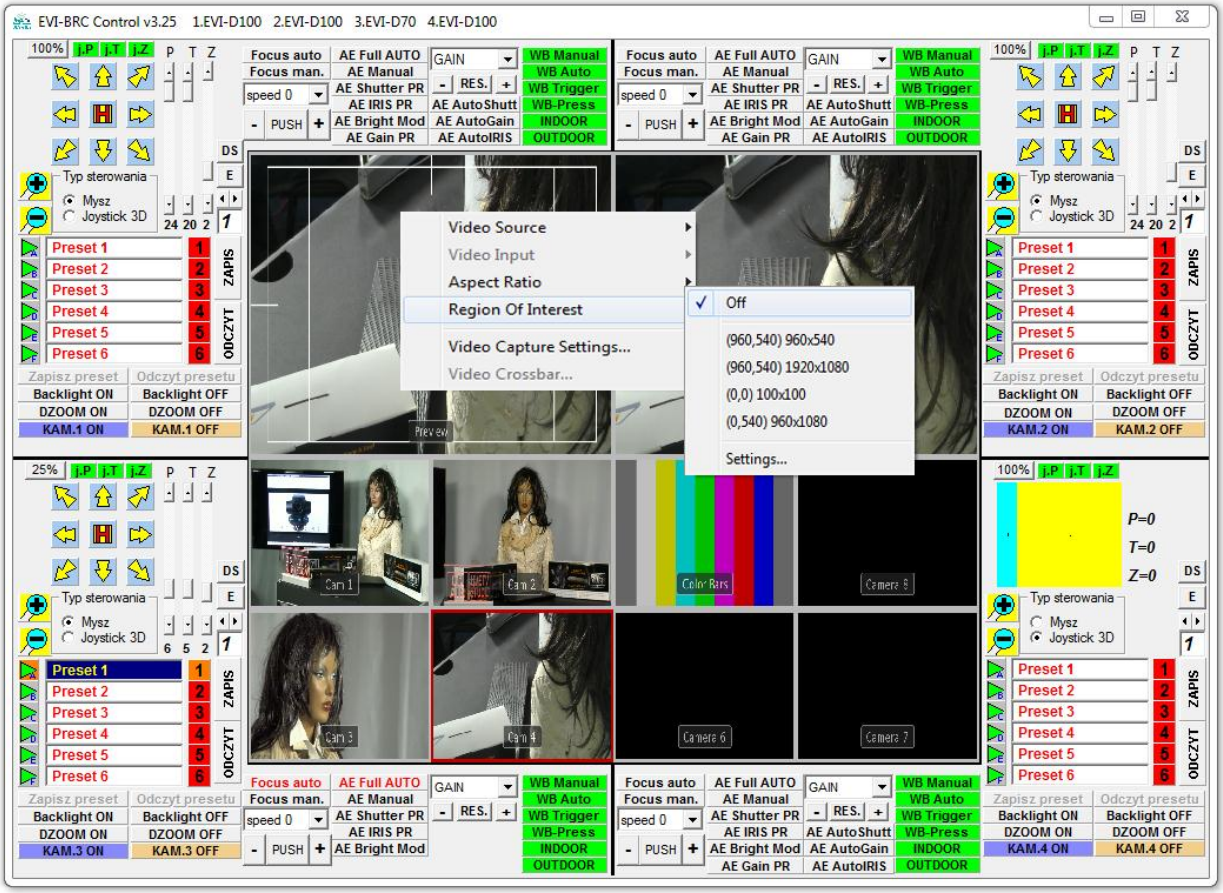
The second type of programs includes software for audio-video streaming like VLC (http://www.videolan.org). If you want to use it for previewing video from your cameras in Live TV Studio, you should select "Internal WEB Quad Preview" at the start of the program. After you start the program, and right-click in the screen field, you will see only one option of streaming URL edition from the remote computer with the broadcast on.



Independently from the chosen program type, the preview of image from the cameras connected to the remote computer will appear, after the settings are configured correctly.

ATEM DIGITAL SWITCHERS – MULTIVIEW OUTPUT

There is a possibility of using the multiview output for preview for ATEM Television studio, ATEM 1M/E or ATEM 2M/E or other similar ones, which have the multiview output. In the EVI-BRC CONTROL program, you can choose any piece of camera preview screen, which will be projected in the screen field of the program (Region of interest). After choosing the right video source for those switchers (see previous pages), the MULTIVIEW image will show in the screen field, given to the video card input (here it is: from Cam 1 to Cam 8) and Preview and Program fields.

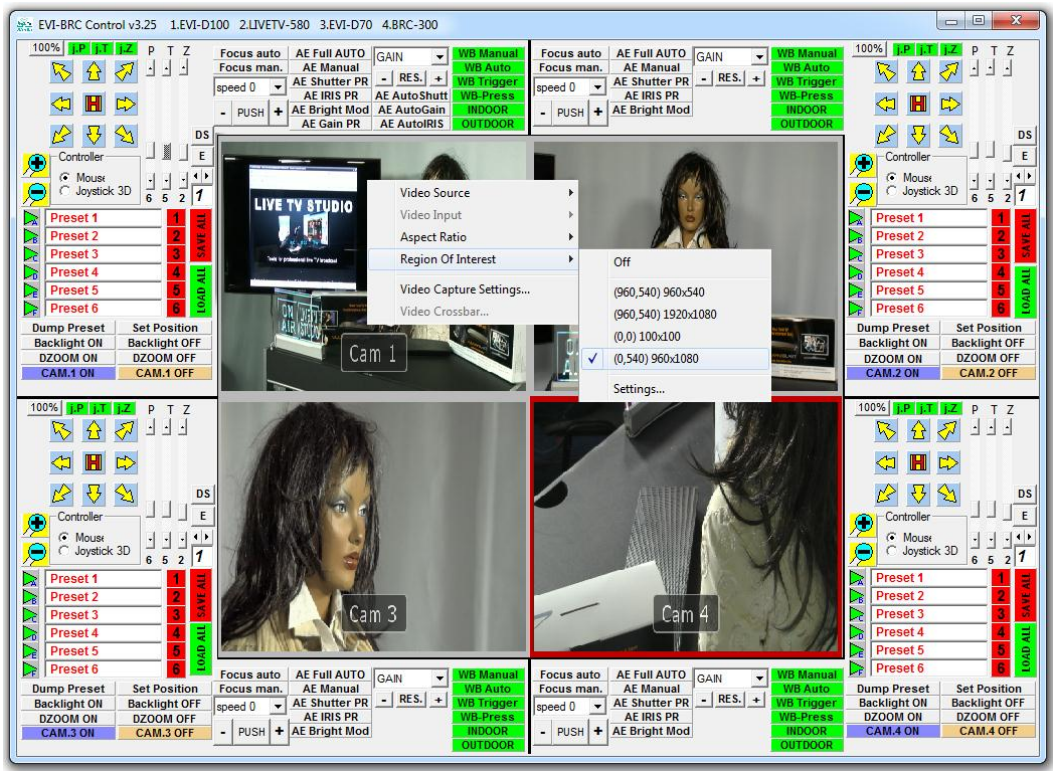


Now you need to right-click in the screen field and choose “Region of interest”. When the “Off” option is chosen, program will display a whole preview from the switcher. Coordinates (in pixels) of the preview which should be visible in the program can be chosen in the “Settings” option. In order to do it, the coordinates of the top left margin of the rectangle, which is going to be previewed, and its width and height.

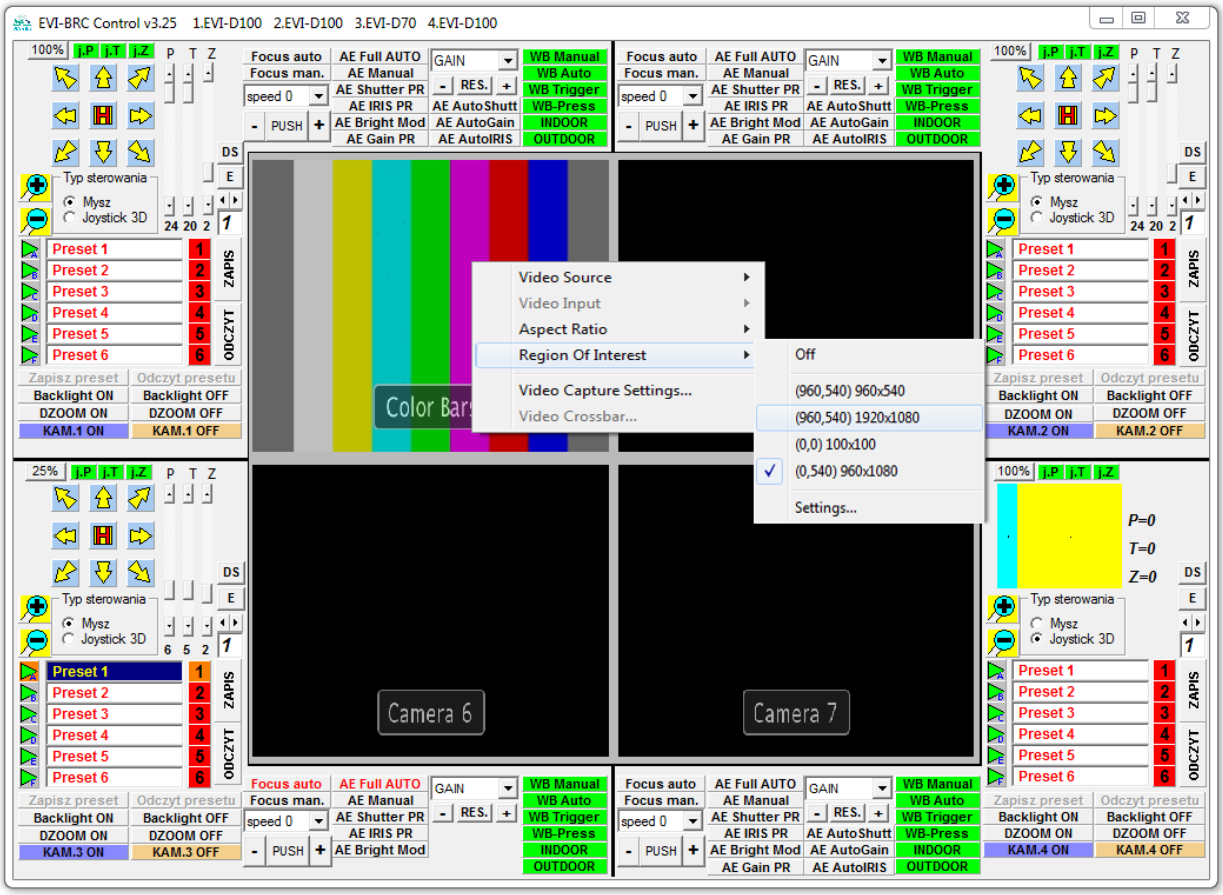
The highest point on the left side of the region of interest has coordinates: X,Y: 0,0
The lowest point on the right is:
for SD = X, Y: 820,576
for HD = X, Y: 1920,1080

Example: If the view from cameras from outputs 1 to 4 from the HD MULTIVIEW output (fields described in the illustration above as Cam 1, Cam 2, Cam 3, Cam 4) should be viewed, the below parameters need to be typed:
X: 0, Y: 540, WIDTH: 960, HEIGHT: 540

These parameters can be set as a PRESET, so there will be no need to enter the parameters during all such operations. They will be saved in the application memory, and it will be possible to change them at any time. There are 4 presets to choose from the sub-menu, which appears after you point the mouse cursor on the "Region of interest" option.



After the Region of interest options are set (for Full HD), parameters can be chosen from 0 to 1920 for X and WIDTH, and from 0 to 1080 for Y and HEIGHT. Below parameters were chosen for the following image (what results in previewing the right down quarter of the screen):
X=960
Y=540
Width = 960
Hight= 540



3.3.3. SELECTING A COM PORT NUMBER FOR A CAMERA

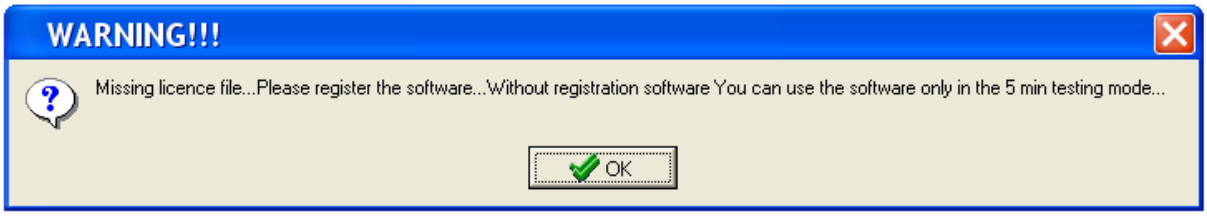
You should first check whether you have properly selected COM port numbers for cameras. For this purpose, try moving camera no. 1, e.g. by pressing one of the arrows in the left upper corner (window for cam. no. 1) and observing which camera is making a move. If camera no. 1 moved, a COM port is OK. If any other camera moved, e.g. cam. no. 3, you should write yourself a note that the camera is controlled by port no. 1 and remember about it when you launch the application next time. Repeat these steps for each camera.

You can also mark particular USB-RS-232 converter ports in some special way, e.g. by sticking an insulating tape to them and writing a COM number on it.

Note! If you change a USB port for a certain converter, a COM number assigned by the system can be also changed. That is why you should always connect a USB-RS-232 converter to the same USB port.

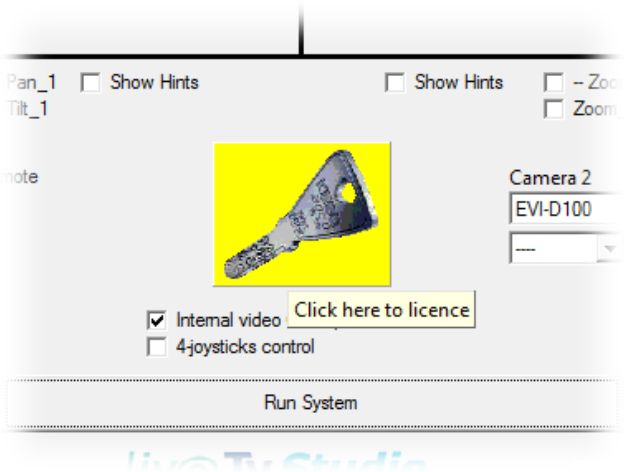
3.4. REGISTERING THE APPLICATION

Once you install the application, it will offer only demo (trial) version features.
Before launch, you will see a warning message and the symbol of a key on the application's screen located under the QUAD window.

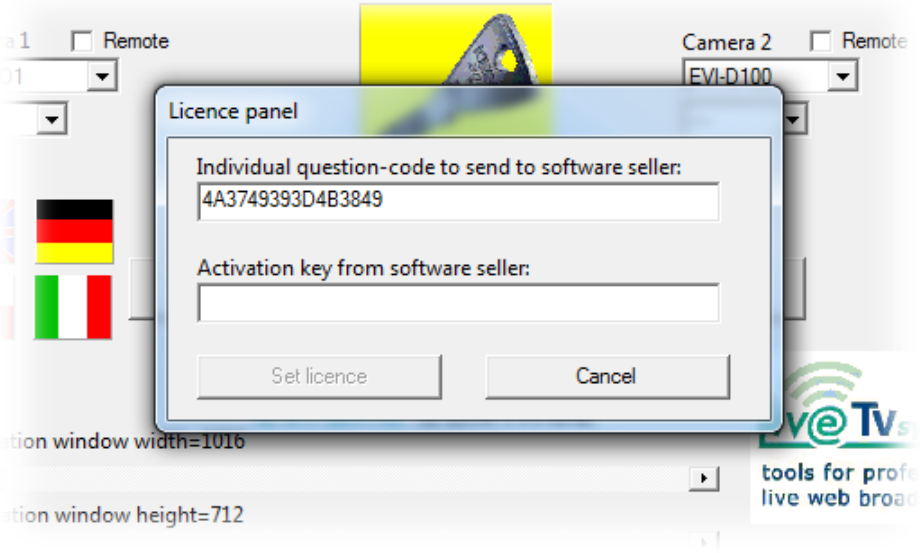

WARNING!!!
Missing licence file...Please register the software...Without registration software You can use the software only in the 5 min testing mode...
OK

Commercial use of the application in a demo version is prohibited by law.
The application offers a limited functionality – you will get information that this is a demo version and operation time will be shortened to 5 minutes. Although it lets you fully test the application, you will not be able to work for long. In order to use the application without breaking the law and dealing with these limitations, register it first.

For this purpose, click on **the image with a key** in the centre of the application window.



"LICENSE PANEL" window will appear.

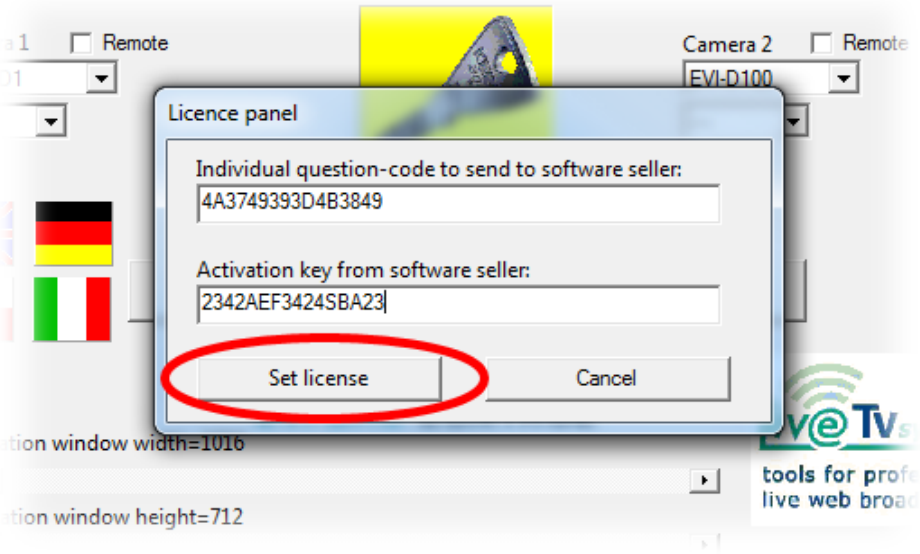


Copy a code displayed in the "INDIVIDUAL QUESTION-CODE..." window, paste it into your email and send it to:

register@livetvsystems.eu

and give a product serial number (you can find it in an invoice for LIVE TV STUDIO's license) and customer number, or together with your personal data and information on a date and on how you have paid for the license. Also, you can enclose a proof of payment. Verification of the data will be done within 24 hours and, if the information provided is found true, you will get a return email with a registration key (letters and digits).

Copy this key from the email and paste it into the "LICENSE PANEL" window under "Activation key from software seller". If the operation is done well, the "REGISTER" button will be activated. Click it. From now on, you can fully use the application on this computer as it has been already registered.



By purchasing the license, you are also given the right to free-of-charge application upgrades within 12 months of the purchase date. You will get information on another versions of the application released by email you have given during the registration procedure.

3.5. WORKING WITH CAMERAS

3D Joystick guarantees optimum recommended camera control – you can control camera gradual movements in 3 PTZ axes (panorama/tilt/zoom) as speed of movement depends on an angle the joystick leans at (zoom – on an angle the joystick is "twisted" at). The joystick buttons and keys have the following functions:

- selecting a number of a camera you want to work with (standard option – 1 joystick for four cameras)
- adjusting the most important parameters of a camera controlled
- correcting vertical/horizontal camera position = P/T is done with a HPM (High-Precision Move) option triggered while holding the fire key down (forward, with your index finger) – in this mode every move of the joystick towards P or T and back sends a command to move a header by a minimum angle (that depends on a camera model) to a selected camera
- recording and reading presets
- modifying a preset range (for each camera you can choose from 5 ranges with 6 presets each, 30 presets in total)
- switching on a joystick/mouse control (press a button on the stick with your right thumb)

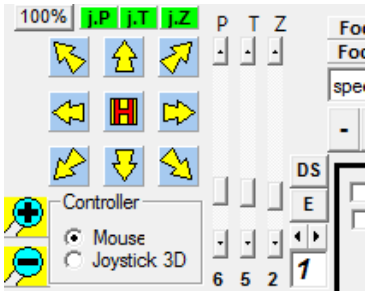
You can switch main camera operation modes (incl. ON/OFF, Auto/Manual) and all camera functions as well as change a camera PTZ position, record, read and name a preset with the mouse. Changing certain, not commonly used camera and application functions can be done **only with the mouse**.

3.6. SWITCHING ON A MOUSE/JOYSTICK CONTROL

Mouse lets you change each of camera functions available and modify presets (recording, describing, reading presets one by one as well as – only in a mouse control mode – saving presets on a hard disk and reading them from it). The joystick can be used for modifying view parameters, recording and reading presets (1-30) and controlling PTZ movements of cameras but only after switching to a joystick control mode for a given camera. You can do it by pressing one of 4 keys on the stick's top that corresponds to a camera number in the system in SPLITTER QUAD.

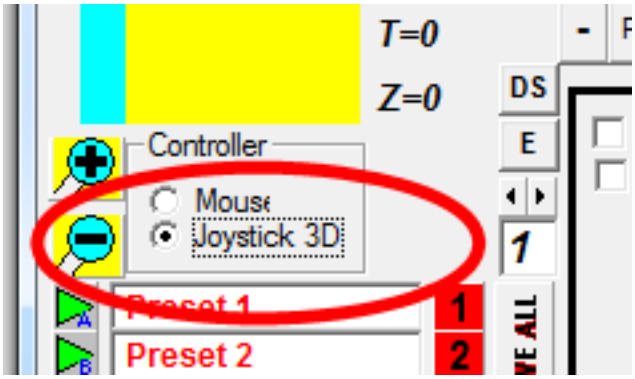
3.7. MOUSE CONTROL

By using your mouse, you do not need to individually select a number for a camera you want to handle. The application has four independent fields with buttons for controlling cameras 1-4. All you need to do is to press down a button in an appropriate field. A button for switching on a mouse/joystick control mode is displayed in each of camera control fields.



3.7.1. PTZ POSITION

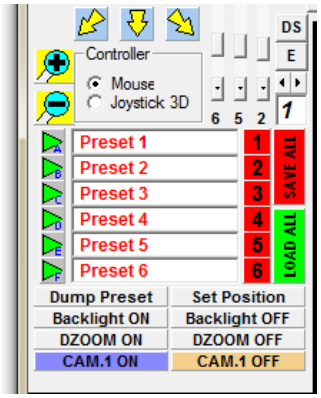
In order to change a position of a camera header, use arrows. The HOME button sets a camera in the middle of P/T ranges. PTZ speed is set with sliders. Below them you can see selected speed. To change zoom with the mouse, use the buttons with +/- signs.



Switch between mouse/joystick control modes with the button located on the stick under your right thumb that corresponds to a number of a camera in the QUAD system or by checking the "joystick 3D" checkbox in a panel of each camera located below the direction arrows.

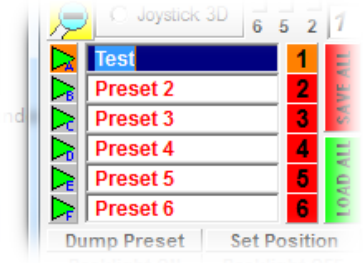
Available ranges depend on a camera type/model and you can find these values in a camera user manual.
Correcting vertical/horizontal camera position = P/T is done with a **HPM (High-Precision Move)** option triggered by clicking in arrows with the right mouse button – in this mode the application sends a command to move a header by a minimum angle (that depends on a camera model) to a selected camera

3.7.2. CAMERA PRESETS



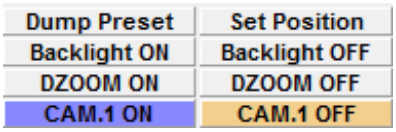
Application can record **up to 30 presets for each camera**. Presets are grouped into 5 sets with 6 elements each and they are numbered. You can name each preset as you want. In order to enter your own description click on a textfield and a cursor will be displayed – that means you can add text from the keyboard.

Preset will be recorded in the application memory once you press the red square with a number (following the description). If the operation goes well, the preset description changes background and font colours (bluish-yellow).



Playing a preset is done after pressing the green triangle with its number. When a camera is set into a recorded position, the preset description changes background and font colours (bluish-yellow).
In order to switch between preset groups, use the 2-arrow field that swaps one group number for another (1-5).

DUMP PRESET / SET POSITION buttons let you save a single preset on a harddisk.

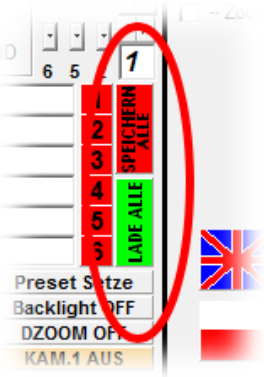


You can save all presets on your computer by pressing the SAVE button (on a red background).

Preset data are recorded with their names (descriptions) you gave them before. When a dialog window appears, select a location on your disk where you want to save a preset (directory or any other drive in your system), give a name for a file and press "SAVE".

Note: SAVE/READ functions are available only in a mouse control mode.

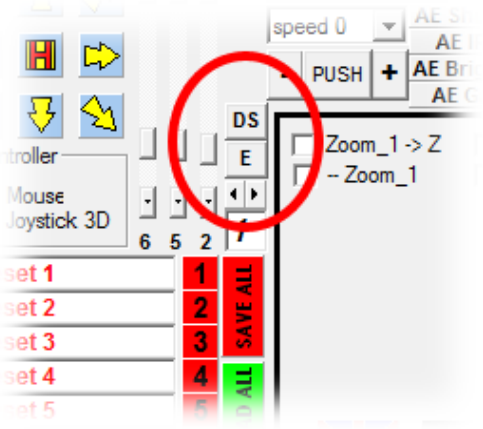
With recording and reading presets, you can make setting plans and camera presets before each broadcast considerably faster by reading recorded settings instead of setting them again.



When LIVE REMOTE MEDIA PROJECTOR is on, each swap of presets also automatically changes a picture on a remote computer with **LIVE REMOTE MEDIA PROJECTOR** installed and launched (if a connection status says OK) to a graphic file/video/animation selected for a preset by you.

3.7.3. CAMERA MENU SETTINGS

With SONY EVI and BRC series cameras, you can preview selected camera functions on the screen (e.g. EVI-D30/31, EVI-D100). For this purpose, click the DS (Data Screen) button. First click launches the preview and the second one – closes it.

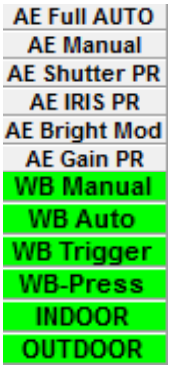


Many SONY EVI and BRC series cameras make it possible to open a screen menu and a settings menu. Open the menu on the output screen of a camera with the DS button. To navigate in the menu use the up/down arrow. You can change values for functions with the left/right arrow.
Enter a submenu with the E button and exit from a submenu/menu with the DS button.

3.7.4. CAMERA SETTINGS AND FUNCTIONS

You can change many camera settings in a manual mode with the use of a function selection field in a camera panel. After you select a function, you can change its value by pressing "+"/"-". The RES button you can see between "+" and "-" is used to reset settings (restores default values).

If you want these changes to take effect, select the MANUAL mode for functions. For example, for the GAIN/SHUTTER/IRIS function enable the AE MANUAL button with your mouse first. When you do that, the button's font colour will change to red. Adjusting R_GAIN and B_GAIN camera colours will be possible after you switch on the WB MANUAL mode.



To change a setting for colour balance (e.g. for EVI-D100, D31), place a camera in front of a white background (e.g. a white sheet of paper in front of the camera), press the WB Pres. button first and then press the WB Tr. button for a while until a new value for colour balance is set.

A preset of this colour balance can be restored (if the value has been modified) by pressing the WB Pres. button again.
If you want to change focus, you need to enable the "Manual focus" button (manual focus settings mode).
When you switch on some models of cameras digital zoom is off by default. You can enable it by pressing the D. ZOOM OFF button.
From then on, you can use the +/- button and the PUSH button that lets you "quickly catch" focus in the manual mode.

You can find detailed information on how to modify particular functions of cameras in user manuals.
Because of different features particular camera models offer, there are various sets of the joystick control button available. A full list of buttons with relevant descriptions is presented in **3.9. CAMERA CONTROL INTERFACE – symbols**.

3.8. 3D JOYSTICK CONTROL

3.8.1. SELECTING A CAMERA

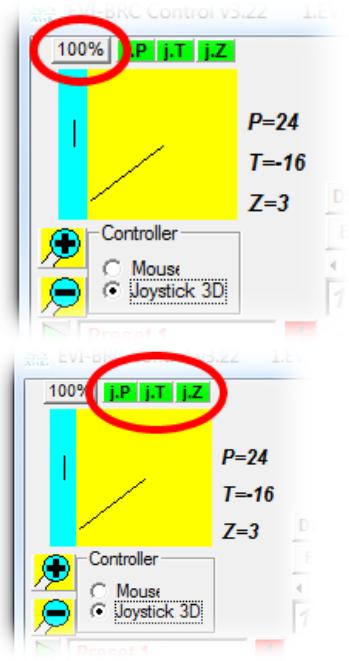
At first, select a number of camera you want to handle. For this purpose, select one of 4 keys on the stick's top that corresponds to a camera number in the system in SPLITTER QUAD. In a control panel of the camera you have just selected, you will see a graphic simulation of the joystick's PTZ movements instead of arrows - it means that you have successfully selected the camera.

3.8.2. CHANGING CAMERA PTZ POSITION

In order to change a P/T vertical/horizontal position of a camera header, move the stick left/right or forward/back. Camera speed depends on an angle the stick leans at. You can change zoom by twisting the stick left/right. In the application window, you can see current direction the stick leans in (graphic simulation) and PTZ speed value (in PTZ numbers). Available speed ranges depend on a camera type/model and you can find these values in a camera user manual.
For easier control, you can change a range of PTZ speed. You do that by pressing the button with a % sign with the mouse. You have 3 options to choose from: 100%, 50% and 25%. For example, 50% reduces a range of PTZ speed by half – the joystick becomes less sensitive by half. When you move the stick then, a camera (or zoom) will move two times slower.

Precise change of position is available in a HPM mode – press and hold the Fire key and make dynamic moves along X and Y axes. In this mode, the application sends a command to move the header by a minimum angle (that depends on a camera model) to a selected camera.

Sometimes, you need to operate a camera only in one axis (e.g. a horizontal panorama, in the P axis). To avoid the joystick's movements in a certain direction, you can temporarily lock remaining axes (T and Z in this case) by pressing the j.T and j.Z buttons with the mouse. When the applications locks movements along these axes, the buttons will go red. When you press these buttons with the mouse again, the applications will unlock these axes and movements will be possible again (normal operation). You can lock axes in any combination.



3.8.3. CAMERA PRESETS

Application can record up to 30 presets for each camera. Presets are grouped into 5 sets with 6 presets each and they are numbered.

Presets are divided into 2 categories. The first one groups presets stored in camera's memory. For SONY EVI series, there are 6 positions (presets 1-6 in the application). Camera BRC-H700, for example, has its own memory that can store up to 16 presets (presets 1-16 in the application). Depending on a camera model, not only positions but also another parameters are stored: view parameters, colour balance, focus settings (manual/automatic) and so on. You can find detailed information in camera's user manual.

Another category groups position presets that are stored only in the application's memory. Before you record a preset with your joystick, select a preset set number (1-5) with the so-called 4 axes' controller. Higher positions correspond to a higher group number and the other way round – controller in its minimum position lets you select group no. 1. The preset will be recorded in the application memory once you press the **FIRE** button, **hold it** and press a button corresponding to a preset (1-6, see photo) at the same time. If the operation goes well, the preset description changes background and font colours in the application window (bluish-yellow).

Playing (restoring) a preset is done by selecting a preset group number (1-5) with the 4 axes' controller and pressing a button corresponding to a preset (1-6). When a camera is set to a recorded position, the preset description changes background and font colours (bluish-yellow). A preset will be highlighted until you change its position.

3.8.4. CAMERA SETTINGS AND FUNCTIONS

EXTREME 3D PRO joystick used for operating cameras lets you modify many settings in a manual mode with the use of a switch (ministick, the so-called POV) located on the top. When you move this ministick up/down, you will switch between functions in a selection field. After you select a function, you will be able to change its value by moving the ministick what gives the same effect as pressing "+"/"-" in a camera panel with the mouse.
If you want these changes to take effect, select the MANUAL mode for functions. For example, for the GAIN/SHUTTER/IRIS function enable the AE MANUAL button with your mouse first. When you do that, the button's font colour will change to red.
Adjusting R_GAIN and B_GAIN camera colours will be possible after you switch on the WB MANUAL mode.
See detailed information on how you can modify particular camera functions in a camera user manual.
Because of different features particular camera models offer, there are various sets of the joystick control buttons available. A full list of buttons with relevant descriptions is presented in chapter **3.9. CAMERA CONTROL INTERFACE – symbols**.

Before you start using the joystick, we suggest you check settings and calibrate it. You can find detailed information in the joystick's user manual.

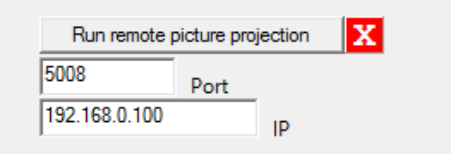
3.9. CAMERA CONTROL INTERFACE – symbols

Arrows (8 directions) = Moving a camera towards a direction denoted by an arrow in a mouse control mode. The movement will be continued until a key is hold

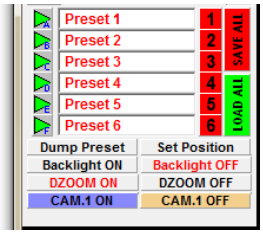
Field with an H letter (between arrows) = Setting a homing position for a **camera in a mouse control mode**

Application width – from 1016 px to 1920 px

Application height – from 712 px to 1080 px



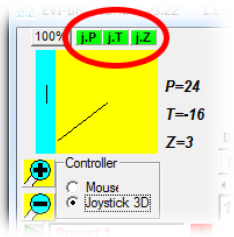
LAUNCH REMOTE PICTURE PROJECTION – switching on remote picture projection (on another computer, in a LAN network or in the Internet)
Port – port number for remote control (it may be found necessary to grant access to this port by modifying firewall/router settings)
IP – remote computer IP address (in LAN/WiFi networks or in the Internet) with **"Remote Picture Projection"** application installed



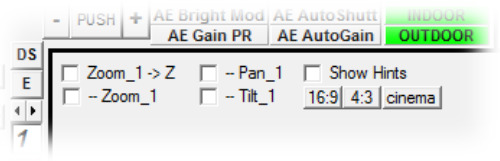
After click – color change to RED (Backlight ON/OFF, Digital Zoom ON/OFF, Fokus Auto/Manual etc.). Exceptions – Kam. ON/OFF

DS= Data Screen - 'Data Screen - Show/hide camera parameters on the video screen from camera; changes with arrows

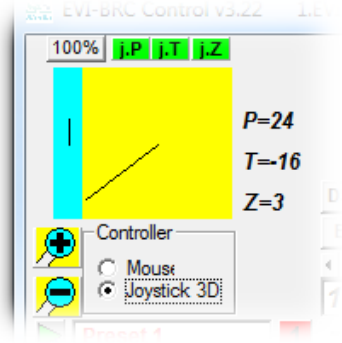
E = ENTER – input to subfolder In camera menu; changes with arrows



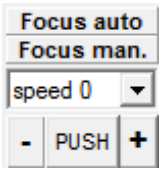
j.P = Blocking the x-axis of the joystick (PAN)
j.T = Blocking the y-axis of the joystick (TILT)
j.Z = Blocking the z-axis of the joystick (ZOOM)



-PAN_1 = Reversing the direction of movement of the horizontal (PAN)
-TILT_1 = 'Reversing the direction of movement of the vertical
-ZOOM_1 = 'Reversing course of the zoom action
Zoom_1-> Z = 'Replacing the R axis joystick to the Z axis
16:9 / 4:3 / cinema – changes proportion of the screen (f. ex. SONY EVI-D100)

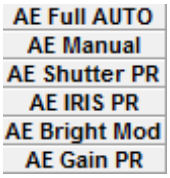


Show Hints = show/hide hints - ON/OFF
Yellow box = Indicator of the x and y axes (the PAN and TILT camera movements for navigating with the joystick)
Blue box = 'Indicator of the z axis (the ZOOM of camera for navigating with the joystick)
Numbers with P T Z – exactly actually speed of camera PTZ changes
Symbol PLUS = Magnification increases - bringing the image (Zoom+)
Symbol MINUS = 'Reduces the magnification - rejection the image (Zoom-)
TCP IP Remote = Raport of the remote controller TCP/IP status. Click to reset and resume transmission

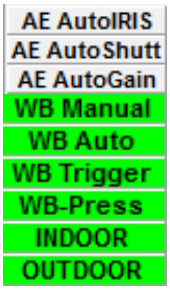


Focus auto = Turning on the autofocus
Focus man. = Turning off the autofocus
Speed 0 = Setting the pace of change focus (Focus Speed)
„–„ = Reduces the severity (FOCUS minus)
"+" = Increases the sharpness (FOCUS plus)
PUSH = Focus control by means of impulse (pattern)

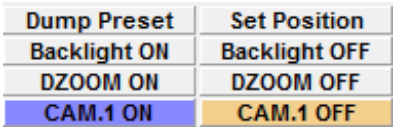
Backlight ON = Background lighting annexed compensation (include BACKLIGHT compensation)



AE Full AUTO = Automatic Exposure mode (automatic setting of all exposure parameters)
AE Manual = Automatic Exposure in manual mode (manual setting of all exposure parameters)
AE Shutter PR = Manual setting Shutter with Fixed Auto Exposure (Automatic Exposure Shutter Priority mode)
AE Iris PR = Manual setting Iris with Fixed Auto Exposure (Automatic Exposure Iris Priority mode)
AE Bright Mod = Manual setting clarity (Automatic Exposure Bright mode)

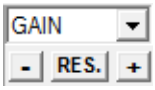


AE Gain PR = Manual setting Gain with Fixed Auto Exposure (Automatic Exposure Gain Priority mode)
AE AutoShutter = Automatic Exposure with automatic shutter setting mode
AE AutoGain = Automatic Exposure with automatic gain setting mode
AE AutoIris = Automatic Exposure with automatic iris setting mode (auto iris)
WB Manual = Manual setting of White Balance (White Balance manual mode)
WB Auto = Automatic setting of White Balance (auto White Balance)
WB Tr = Manual adjustment White Balance with one impulse on the pattern (white balance trigger)
INDOOR = The factory setting INDOOR WB (white balance indoor)
OUTDOOR = The factory setting OUTDOOR WB (white balance outdoor)
WB-Pres = preset WB with WB Manual

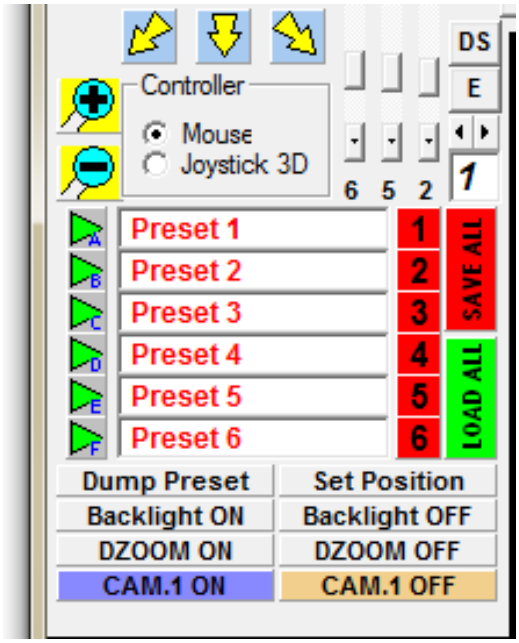


Dump Preset = Saves the current position of the camera to a file
Set Position = Set the camera in position as saved in the file
Backlight OFF = Excludes compensation background lighting (exclusion BACKLIGHT compensation)
DZOOM OFF = Disables the camera digital zoom (digital zoom OFF)
DZOOM ON = Enables the camera digital zoom (digital zoom ON)
KAM. 1 ON = Turn on camera,
KAM. 1 OFF = Turn off camera

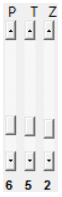
SHUTTER/BRIGHT/GAIN/IRIS etc. = Setting the field of regulations
R_GAIN = Red color changes in WB Manual
B_GAIN = = Blue color changes in WB Manual



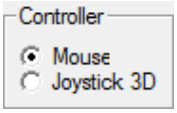
EXP_COMPENSATION = exposition compensation
MINUS = Reduces the value of the selected field of choice parameter image (SHUTTER, BRIGHT, GAIN, IRIS, and the camera parameters 70/100/HD1 strengthen R_GAIN and B_GAIN and EXP_KOMPENSATION)
RES. = (RESET) - Setting the default values of a selected field of choice parameter image (SHUTTER, BRIGHT, GAIN, IRIS, and the camera parameters 70/100/HD1 strengthen R_GAIN and B_GAIN and EXP_KOMPENSATION)
PLUS = Adding to the value of the selected field of choice



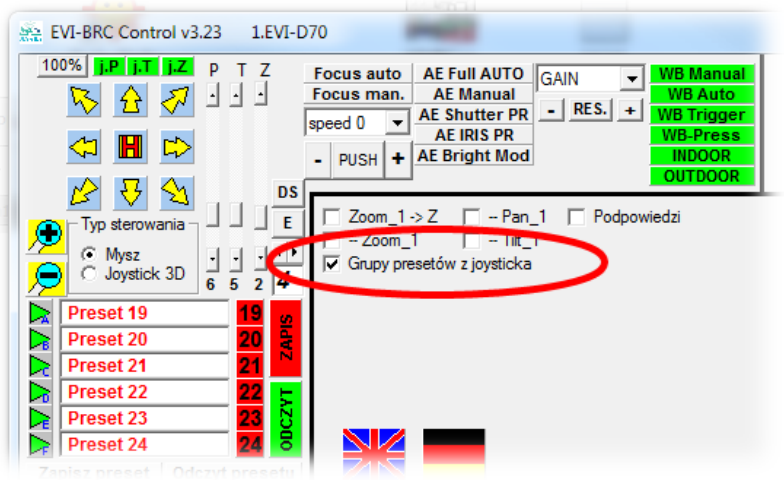
Green triangle with A-F letters – buttons used to load a PTZ presets from the camera; press the mouse causes the reading stored in memory coordinates of the PTZ camera.
Red square with preset number 1-30 – Key to record position of camera as a preset PTZ (saves a preset in memory). Note: The value of the PTZ position is not remembered in the camera when it's turned off.
Text fields (where is the word Preset …) – Description of the selected preset – you can easy modify text area by pressing on it and type your name of preset. This text is stored on the disk together with the values for each PTZ preset.
SAVE ALL - Saves the file on the hard drive of all presets of camera settings, along with text descriptions. Note - the operation works only with control switched to the mouse .
LOAD ALL - Restores presets of the camera from the file, which was previously saved to disk. Note: The operation takes from few seconds - depending on the type of camera used, and only works with control switched to the mouse.



The vertical scroll with an adjustable element P = for setting the speed of the PAN-movement (X axis)
The vertical scroll with an adjustable element T = for setting the speed of the tilt-motion (Y axis)
The vertical scroll with an adjustable element Z = for setting the speed of the ZOOM-motion (Z axis)



Mouse / Joystick 3D = switching of control mouse / joystick



Preset group from joystick – a capability to disable fourth axis of the joystick .(which changes presets banks). This function can make easier work with LIVE TV Studio when you dont use presets with greater value than 1-6.

4. APPENDIX

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